



# A Design Proposal for the Georgia Tech Community Garden

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Prepared as a final project in my  
Permaculture Design Certification

# What is Permaculture?

Permaculture is a design methodology rooted in the observation and emulation of natural systems that outlines a path for people to reintegrate themselves with the entirety of the community of life.



# Permaculture Cognitive Hierarchy



Prime  
Directive

The only ethical decision is to take responsibility for our own existence and that of our children. Do it now.

Three Ethics

Earth Care  
People Care  
Return of Surplus (Future Care)

12 Design Principles

1. Observe and Interact
2. Catch and Store Energy
3. Obtain a Yield
4. Apply Self-Regulation and Accept Feedback
5. Use and Value Renewable Resources
6. Produce No Waste
7. Design from Patterns to Details
8. Integrate Rather than Segregate
9. Use Small and Slow Solutions
10. Use and Value Diversity
11. Use Edges and Value the Margins
12. Creatively Use and Respond to Change

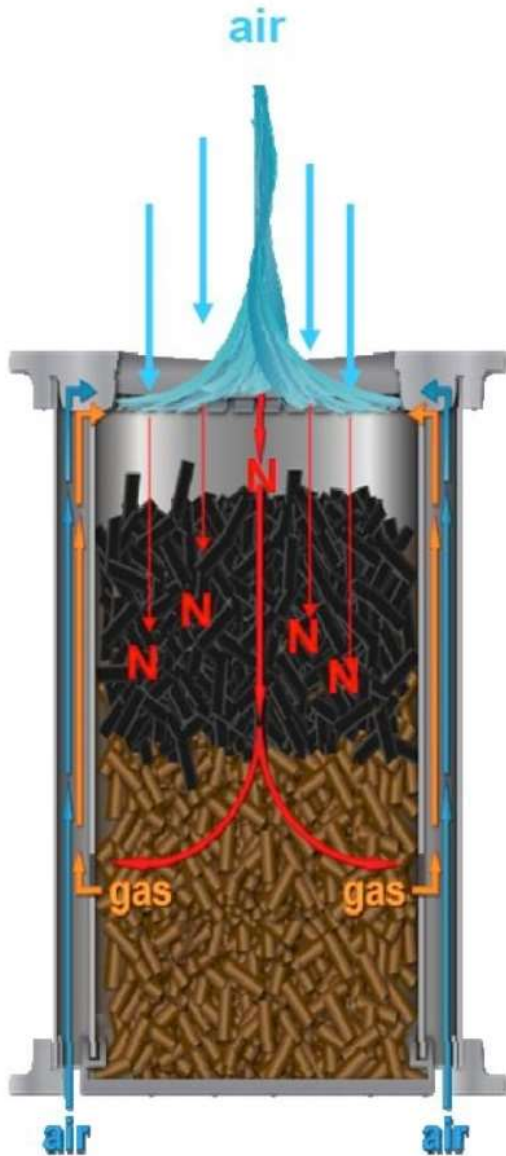
# What is a PDC?

- 72 hour standardized curriculum
- Survey course of regenerative technologies
- Garden as metaphor for design

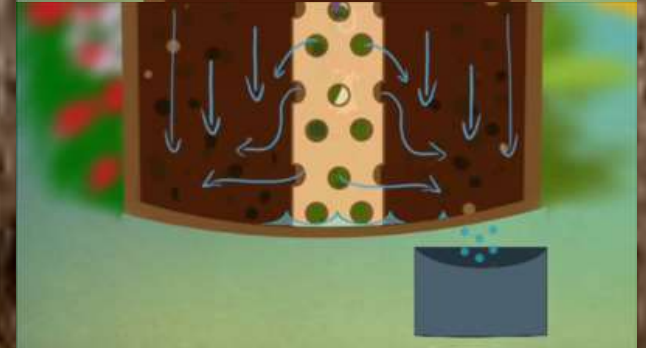
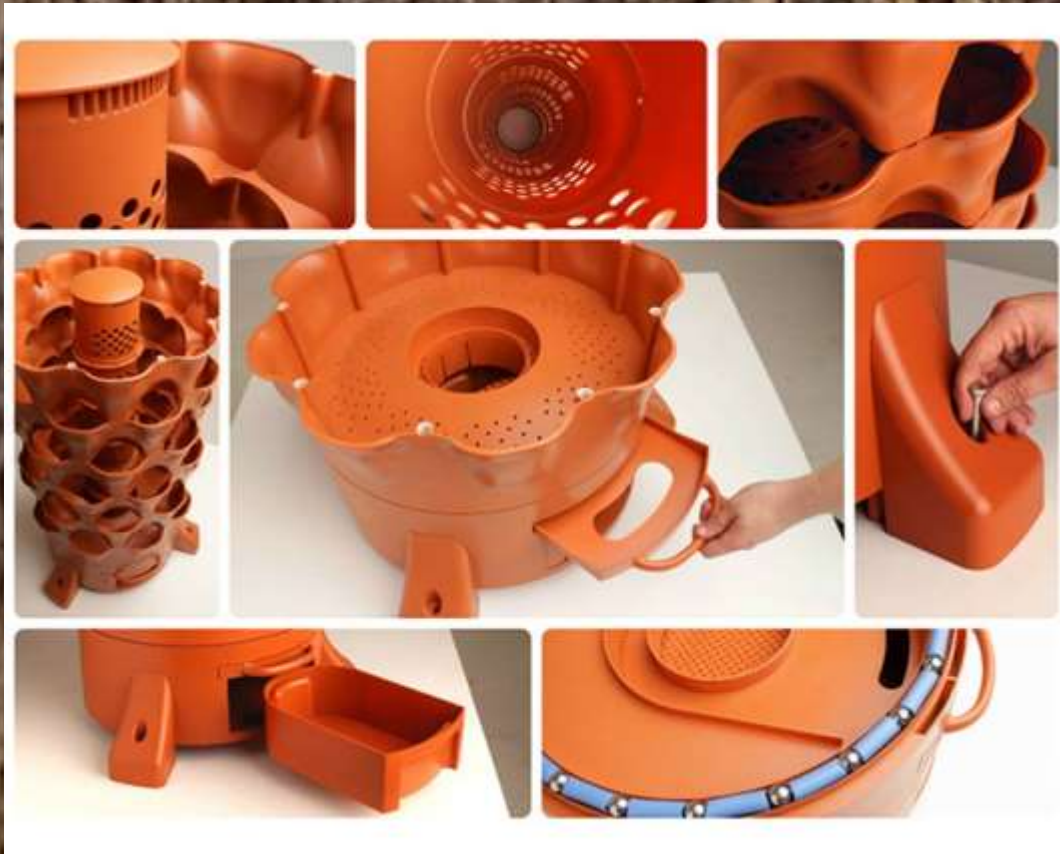
Main Purpose: Paradigm shift from people as a destructive force separate from “Nature,” to people as a regenerative force integrated with Nature.

paradigm: a distinct set of concepts or thought patterns, including theories, research methods, postulates, and standards for what constitutes legitimate contributions to a field.

# Example: Worldstove



# Example : Garden Tower Project



# The Georgia Tech Community Garden



# Why Redesign the GT Garden?

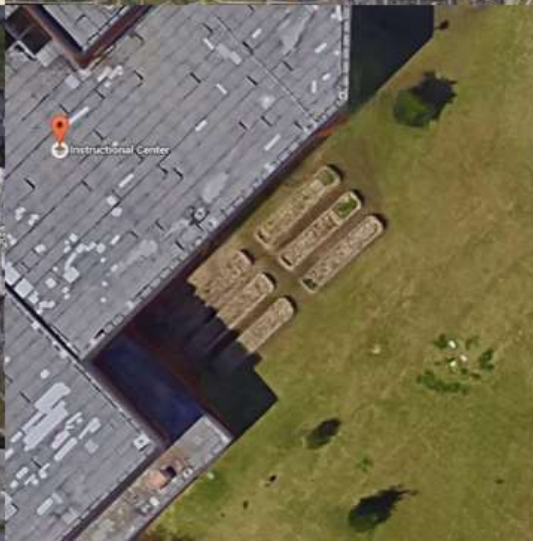
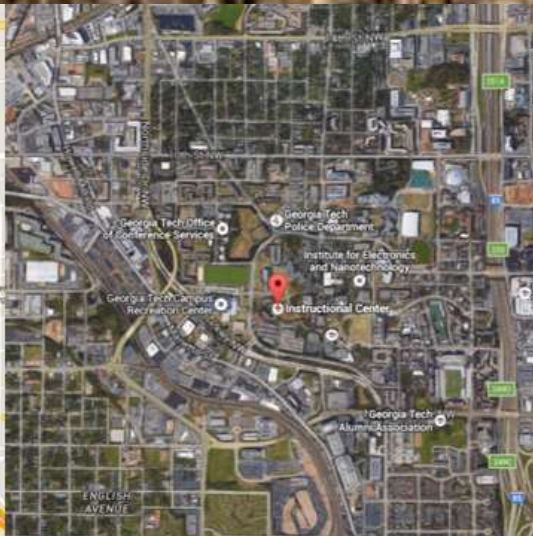
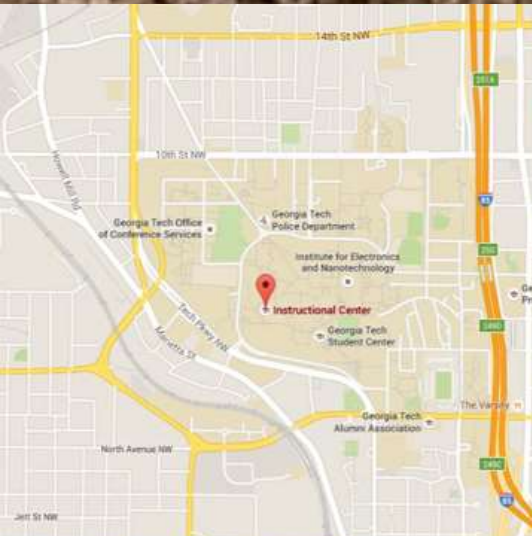
- Tenuous tenure
- Mismatched academic & gardening schedules
- Inconsistent results
- Demonstration site for urban farming efforts at GT

Project Goals - Infrastructure – Hardwire systems in place that will make success easier.

- Awareness – Food Issues, Ecology, Regenerative Paradigm
- Graduates – Exposure to student body, PDC grads?
- Knowledge – Extend technical knowledge of GT context, new innovations

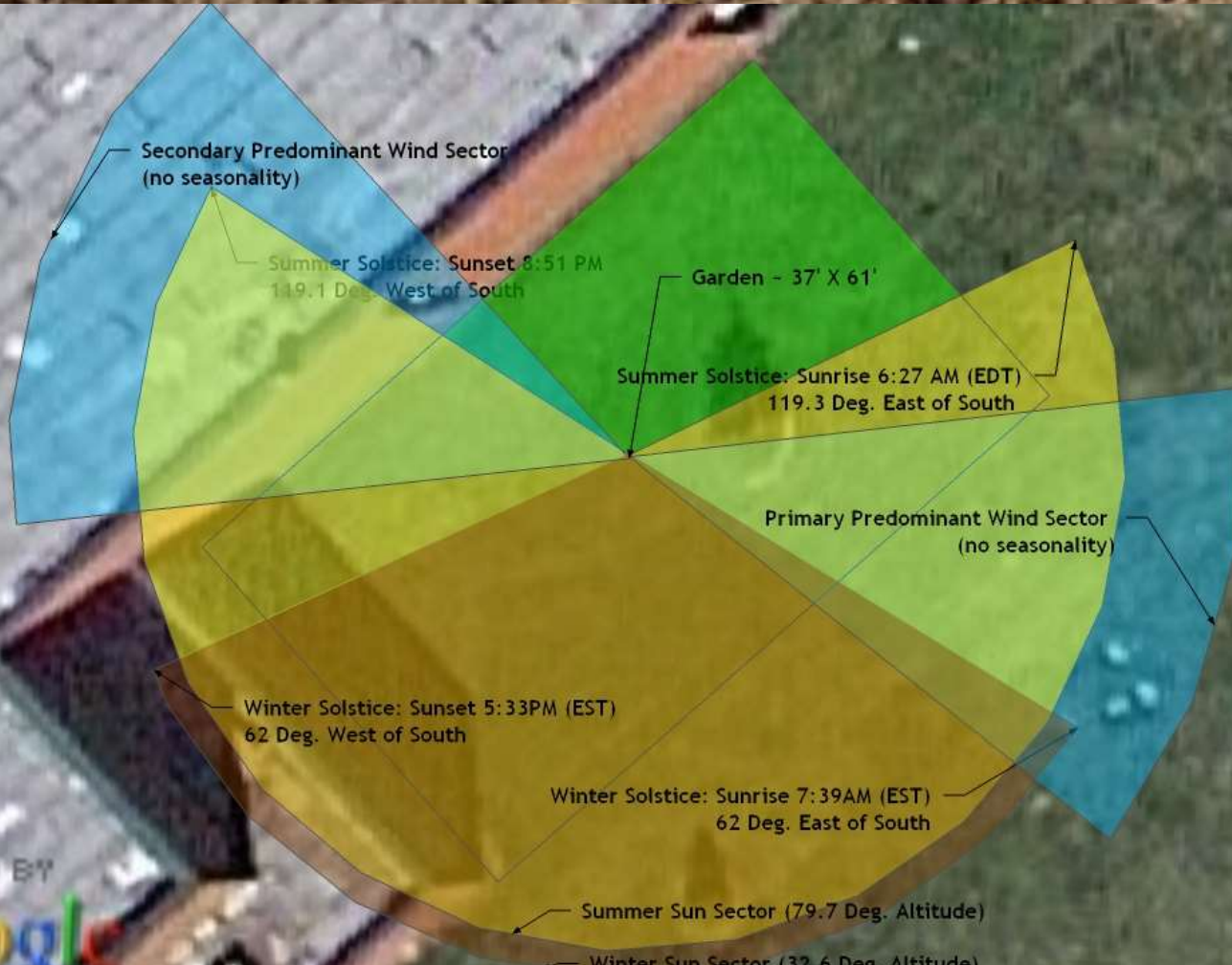


# Site Analysis



30 yr. avg. rainfall: 49.71  
Prevailing winds: Not significant  
Latitude: 38° North  
Altitude: 990 ft.  
Effective Latitude: 35°  
USDA Zone: 7b/8a  
Season: Apr 15 – Nov 21  
Soil Type: Loamy Sand  
Soil pH: 6.5 – 7  
Climate Analogue: Southern Turkey, Northern Iraq/Syria

# Sector Analysis



POWERED BY



Imagery ©2012 Satpro

# Zone Analysis

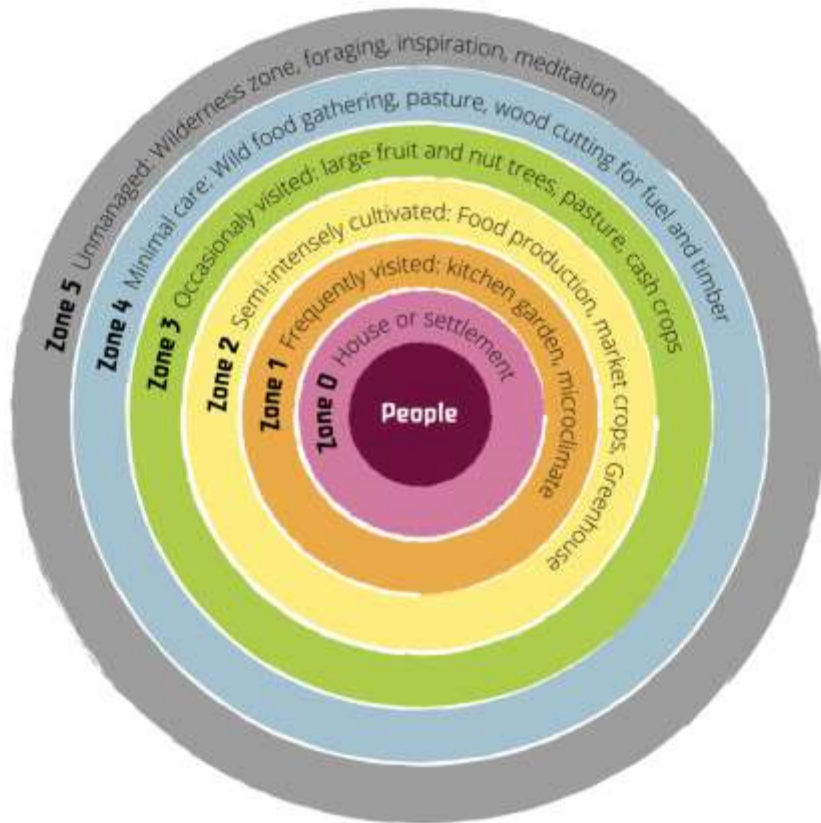


Illustration: Felix Müller ([www.zukunft1-urbanmaechen.de](http://www.zukunft1-urbanmaechen.de)) Licence: CC-BY-SA 4.0

Zone 1: Garden beds, outdoor furniture, tool shed, cooking infraX, Yields: goodwill, credibility, produce, sense of place

Zone 2: Fence, border, vertical spaces, dwarf fruit trees, bushes, birdhouses, composting, worms, small water features/aquaculture

Zone 3: Landscaped areas near garden, increase biodiversity, beehives, EcoCommons integration. Yields: training, enthusiasm.

Zone 4: Foraging/gleaning maps, campus resources cycled into garden. Yields: collaborations

Zone 5: Wilderness hikes, service projects, rewild a section of campus. Yields: biodiversity, pedagogical inspiration

# Client Needs & Requests

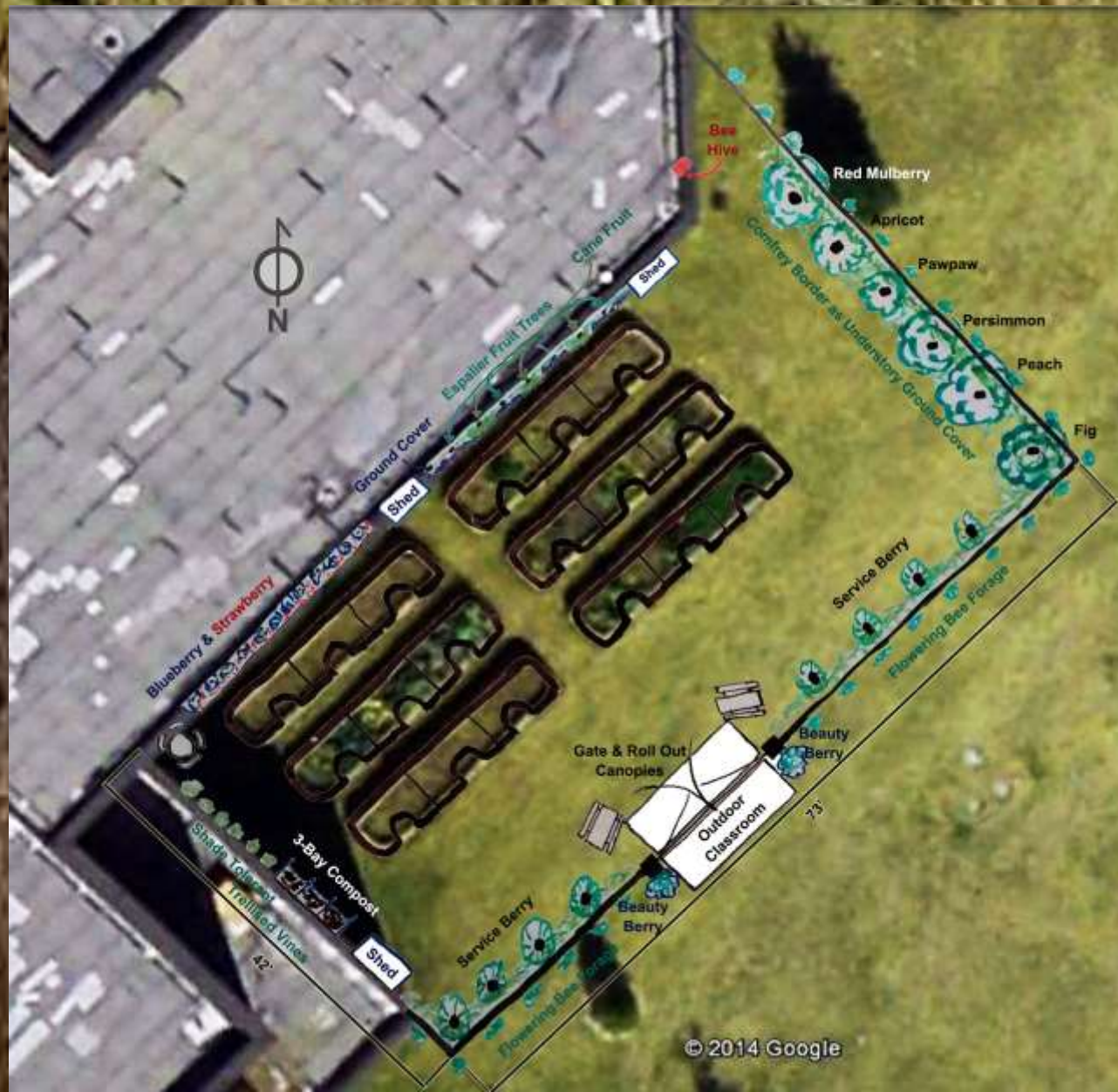


- Fence
- Rainwater Catchment
- Tool Shed
- Outdoor Classroom Infrastructure
- Seating
- Shade
- Composting Infrastructure
- Mitigate nearby chemical use
- Perennials, Fruit Trees
- Tenure, Goodwill

# Phase 1 Elements

- Perimeter fence and gate
- Signage/Wayfinding
- Mulched paths
- Redesigned raised beds
- On-site composting
- Tool shed
- Complement of tools (basic hand tools and site maintenance tools, like a wheel hoe)
- Outdoor furniture (picnic tables, benches)
- Outdoor classroom awning
- Bee hives
- Espalier and vine trellis structures
- Comfrey tractors
- Productive tree and bush guilds
- Social systems – Individual Plots!!!

# Phase 1 Elements



# Phase 1 Elements

1988 1/2014 2014

Exit ground-level view



Google earth

1997

Imagery Date: 1/23/2014 33°46'33.41" N 84°24'04.41" W elev 981 ft eye alt 991 ft

# Phase 2 Elements



- Greenhouse
- Rainwater catchment and storage
- Hugelkultur
- Stand-alone perennial herb bed
- Mushroom log cultivation
- Mushroom bed
- Wicking beds
- Garden towers
- Solitary pollinator, insect predator hotel
- Bird houses



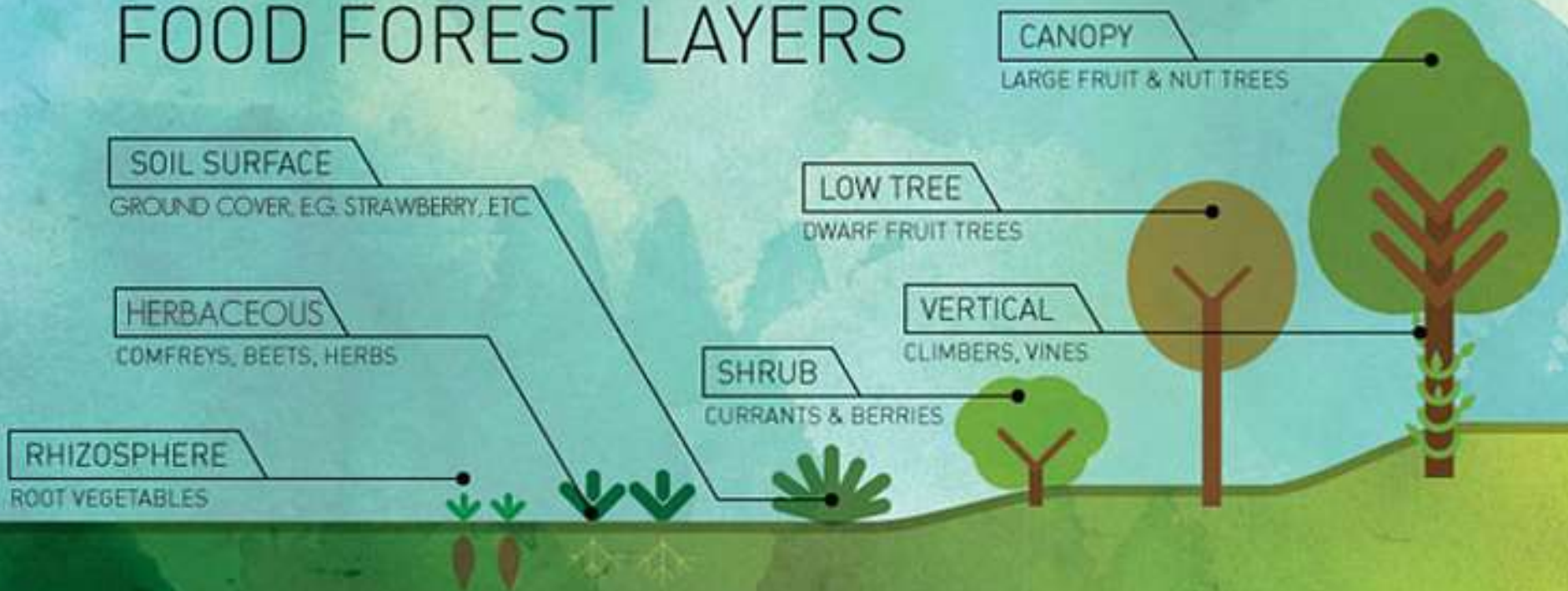
# Phase 2 Elements



# Phase 3 Elements

- Swales and food forest systems
- Aquaponics system
- Water features
- Solar PV systems

## FOOD FOREST LAYERS



# Phase 3 Elements



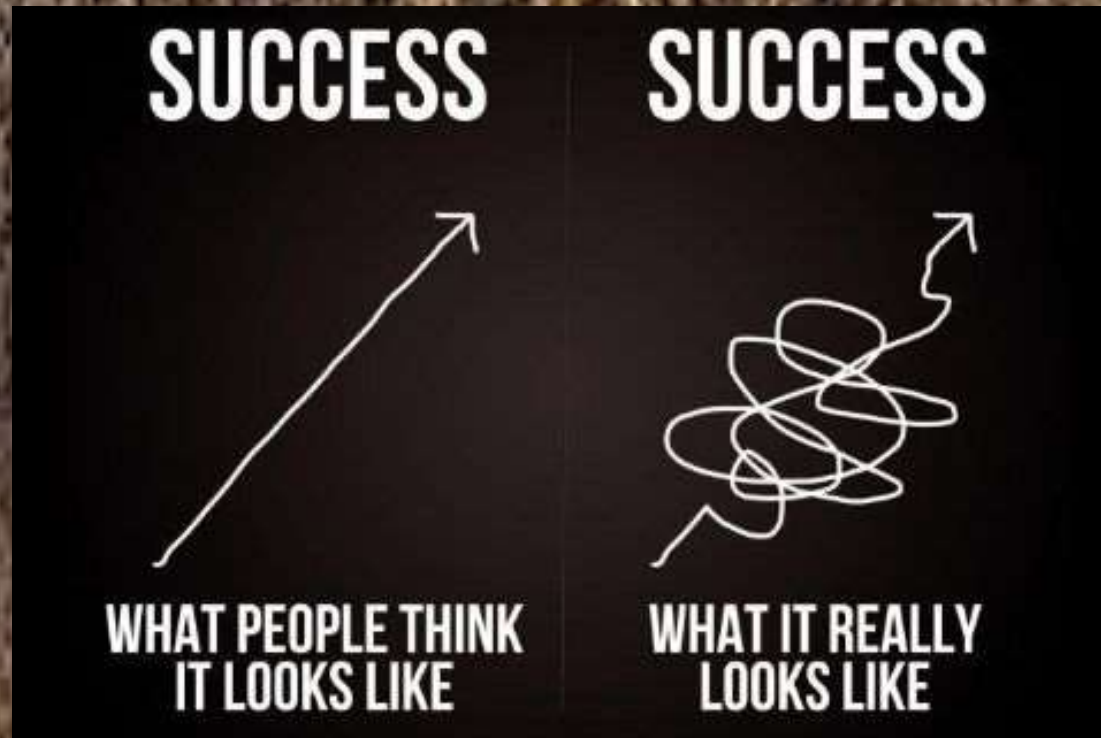
# Concluding Remarks

- “No battle plan ever survives contact with the enemy.”
- Planning helps us to:
  - explore constraints/degrees of freedom,
  - develop creativity,
  - learn problem solving,
  - set goals,
  - dream about aspirations,
  - set benchmarks.
- Complexity is simple, design for complexity.
- Understand the conditions under which something thrives, and design for those conditions to be present.
- I can't change the world, but I can change my little piece of it.

# Resources

- OSU Intro to Permaculture MOOC, May 2nd-30th  
<http://open.oregonstate.edu/courses/permaculture/>
- Greening the Desert – Geoff Lawton  
<https://www.youtube.com/watch?v=1WBwGB6zC7M>
- Green Gold – John D. Liu  
[https://www.youtube.com/watch?v=aFgmt8M\\_NoU](https://www.youtube.com/watch?v=aFgmt8M_NoU)
- Bill Mollison – Global Gardener Series

# Humbly Submitted...



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